

### REMARKS

In reply to the Office Action dated August 11, 2006, Applicants submit the following remarks.

The Examiner rejected claims 1-5, 7-9, 13-19, 21, 22, 26 and 27 as being anticipated by Sherman et al. (USPN 6,451,240, hereinafter "Sherman"). Sherman describes a method of manufacturing an intracutaneous microneedle array, wherein the array is constructed to effect various medical treatments, including drug delivery, fluid sampling, and other biological tests. Applicants' response to an earlier office action dated March 23, 2006 clearly pointed out the significant differences between Applicants' *microelectrode* array and Sherman's *microneedle* array, yet the Examiner still fails to recognize the difference between the two.

Applicants claim "a microelectrode comprising an upper surface, two walls, and a polymer core..." The base of Applicants' microelectrode is solid throughout, as described throughout the specification, and specifically in FIGS 1-9. In contrast, the microneedle embodiments are described by Sherman as hollow, cylindrical, pillar-like structures, having, in one form or another, a hole, or a plurality of holes, at the end of the pillar for dispensing or sampling fluid into or out of the microneedle. An upper surface extending over the holes would preclude sample fluid draw or extrusion, which is the function of Shermans' invention.

The Examiner, for a second time, points to Sherman's figures 56A and 56B for support of his position. However, the Examiner fails to address Applicants' previously submitted rebuttal to reference of these figures: that Sherman's microneedle structure has a continuous electrically conductive layer, reference numeral 1372 in FIG. 56B, that significantly differs from Applicants' thin metal film. Applicants' microelectrode, as required by claims 1 and 15, comprises a metal thin film lacking continuity across the lower surface. Evidence of the continuous nature of Sherman's electrically conductive layer is found at col. 38, lines 16-22. In addition, FIG. 56A represents a "snapshot" of one stage in a multi-stage process for forming Sherman's claimed microneedles. The structure referenced by number 1332 is not a metal thin film, as the Examiner alleges, but rather a "chemical coating" as described in column 37, lines 37-40. In any regard, neither FIG. 56A nor 56B represents a microelectrode comprising an upper surface (it's *hollow*,

see col. 35, lines 30-32), two walls (it's *cylindrical*, see col. 5, line 59), with a metal thin film in contact with the polymer core, and the lower surface lacking a continuous metal thin film.

The Examiner, at page 3 of the office action, attempts to describe a "hypothetical vertical" plane with regard to the metal thin film, presumably in regard to Applicants' claim language of "each of the two walls forming an angle with a lower surface..." Applicants' claims are clear as to exactly which walls are forming surfaces and angles. Arguing an imaginary limitation not described in a reference is superfluous. In any case, the "hypothetical vertical" argument is moot in light of the previous arguments.

The Examiner relies again on Sherman et al. for rejecting claims 6, 10-12, 20, and 23-25 as being unpatentable as applied to claims 1 and 15. As to dependent claims 6 and 20, which depend on independent claims 1 and 15, respectively, the added limitation of same or similar materials in the core and lower surface does not solve the deficiencies of Sherman. Furthermore, there is no motivation present in Sherman, implicit or implied, for modifying the claimed microneedles to meet the limitations and function of Applicants' microelectrode array with respect to core and surface materials.

The Examiner rejected claims 10-12 and 23-25, which place limitations on the metal thin film dimensions, as being obvious in light of in re Aller, 105 USPQ 223. This rejection is baseless, since nowhere in Sherman is made mention of the physical dimensions of the conductive layer (1372 in FIG. 56B, for example), which, presumably the Examiner is comparing to Applicants' metal thin film. In the absence of a 'general condition' of the claimed art, this rejection is unsubstantiated and precludes obviousness.

In response to the Examiner's remarks that begin on page 4, Applicants again point out the fundamental difference between the claimed subject matter and that of Sherman: Sherman's microneedle is *cylindrical and hollow, with holes*; Applicants' microelectrode core is *solid and rectangular*. Figures 54A and 54B are cross-sectional views of a cylinder, *which, when viewed as a cross-section from a side view looks like a rectangle, even though it obviously is not*. Like the Examiner's "hypothetical vertical" argument discussed above, Applicants cannot follow the logic recited on page 5 of the office action, unless there is the misunderstanding on the Examiner's part that FIG. 54A and 54B illustrate two separate pillars, e.g., reference numerals 1172 and 1174. This is clearly not the case, as will be verified at col. 35, lines 30-32. A cylinder

*per se* does not comprise multiple walls; Applicants' independent claims 1 and 15 recite multiple walls.


Claims 1-22 are in condition for allowance. Applicants respectfully request the Examiner remove his rejections based on the above arguments and seek accelerated examination to compensate for undue pendency imposed by the Patent Trademark Office.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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